From the Annals and Magazine of Natural History,
Ser. 7, Vol. x., *July* 1902.

Notes on Scottish Crustacea. By Thomas Scott, F.L.S.

[Plate I.]

(1) Isopoda.

Pleurocrypta longibranchiata (Bate & Westwood), G. O. Sars.
(Pl. I. figs. 1 & 2.)

The female and male specimens of *Pleurocrypta* represented by the figures 1 and 2 (Pl. I.) were obtained on a specimen of *Galathea* captured in the Clyde and sent to me by Mr. Alexander Patience, of Glasgow.

The female is nearly symmetrical in form, and its outline, seen from below, is somewhat ovate. The greatest width, which is near the anterior end, is equal to rather more than half the entire length; the anterior end is broadly rounded, but posteriorly the body becomes gradually narrower and terminates in a small subquadrangular plate. The pleopods and uropods are considerably elongated, but the uropods are

more slender than the other appendages, as shown in the figure (fig. 1).

The male is somewhat depressed, and when viewed from above is nearly cylindrical. It is very nearly 2 millim. long and its breadth is equal to fully one third of the entire length; the forehead is broadly and evenly rounded; the metasome consists of an entire piece of a triangular form, the apex of which is somewhat blunt-pointed.

Both the female and male of this Clyde parasite agree very well with the description and figures of *Pleurocrypta longibranchiata* as given in Prof. G. O. Sars's recently published monograph on the Norwegian Isopoda *, but they differ slightly from the description and figures of the same species in vol. ii. of 'British Sessile-eyed Crustacea' by Bate and Westwood †, the difference being more marked in the male than in the female; the last-mentioned authors in their description of the male state that the "pleon (metasome of G. O. Sars) is composed of an elongate ovate-conic piece, in which the segments are fused together," and their figure of the male corresponds with the description. Notwithstanding this difference and the proportionally narrower form of the female, Professor G. O. Sars believes that the species described by him "is identical with that described in 'British Sessile-eyed Crustacea' as *Phryxus longibranchiatus*." It may be remarked that M. Bonnier, in his excellent monograph ‡, while accepting the identification of the learned author of the 'Crustacea of Norway,' does so with a certain amount of reserve.

The *Galathea* on which the *Pleurocrypta* recorded here was obtained appeared to be somewhat immature; at first I thought it might be the *Galathea nexa*, Embleton, the species on which G. O. Sars obtained his specimens of *Pleurocrypta longibranchiata*; but I am now inclined to ascribe it to the more common *Galathea dispersa*, Spence Bate; it agrees better with this species in the form of the rostrum than with either *G. nexa* or *G. squamifera*, Leach, which belong to the same group as *G. dispersa*. In an interesting monograph of the "Galatheidæ des Côtes de France" by M. Jules Bonnier §, the author divides *Galathea* into three groups:—1st, species furnished with an epipodite on the first pair of

* 'Crustacea of Norway,' vol. ii. p. 206, pl. lxxxvi. fig. 2 (1898).

† 'British Sessile-eyed Crustacea,' vol. ii. p. 246 (1868).

‡ 'Contribution à l'Étude des Épicarides: les Bopyridæ,' p. 316 (1900).

§ 'Bulletin Scientifique de la France et de la Belgique' (1888), pp. 35–95.

thoracic feet only; this includes only one species, *Galathea intermedia*, Lilljeborg. 2nd, species furnished with epipodites on the first three pairs of thoracic feet; this group comprises *G. squamifera*, *G. nexa*, and *G. dispersa*. 3rd, species without epipodites on the thoracic feet; only one *Galathea* (*G. strigosa*, Fabr.) belongs to this group. Our *Galathea* belongs to the middle group, but the second and third joints of the third maxillipeds differ somewhat in their proportional lengths from the three species composing the group. I am inclined, however, to ascribe it to the last one, as the form of the rostrum agrees more closely with the rostrum of that species.

Pleurocrypta Patiencei, sp. n.
(Pl. I. figs. 3, 4.)

This *Pleurocrypta* was obtained on a specimen of *Caridion Gordoni* (Spence Bate) dredged in the Clyde by Mr. Alexander Patience, of Glasgow, who kindly presented it to me, and in compliment to whom I have named it.

The parasite was attached, as usual, under the cephalic shield, and in the present instance on the left side, of the *Caridion*, and is represented by both male and female specimens.

The female is distinctly unsymmetrical, and measures about 4·6 millim. (nearly $\frac{1}{5}$ of an inch) in length; the greatest width, which is near the middle, is equal to about two thirds of the length. The anterior end is obliquely truncate, while posteriorly the sides converge somewhat evenly and terminate in a bluntly rounded apex. The cephalon is deeply immerged in the first segment of the mesosome, and in this respect the female resembles a female *Bopyrus* or *Bopyroides*. The uropoda consist of two small elongate-oval plates, similar to those of *Pleurocrypta microbranchiata*, G. O. Sars (*P. intermedia*, Giard and Bonnier), and the pleopoda are also, as in that species, scarcely developed.

The male is subcylindrical and moderately narrow (fig. 4); its entire length is about 1·6 millim. ($\frac{1}{16}$ of an inch) and its greatest width is equal to rather more than one third of the length. The head is small, being scarcely one sixth of the entire length; it is broadly rounded in front and rather narrower than the next segment. The segments of the mesosome, though distinct, are not widely separated from each other, and they are all of nearly equal size. The meta-

some, as in the males of other *Pleurocrypti*, is composed of one piece; at the proximal end it is about as broad as long, but the sides, which are broadly but slightly unequally rounded, converge posteriorly and terminate in a minute sharp-pointed apex, as shown in the drawing.

So far as I know, *Pleurocrypta Patiencei* appears to be the first Bopyrid parasite that has hitherto been recorded from *Caridion Gordoni*, and this is the more interesting from the fact that these parasites have been so carefully and exhaustively studied by such eminent investigators as Prof. Giard and M. Bonnier in France and Prof. G. O. Sars in Norway.

Pleurocrypta cluthæ, sp. n. (Pl. I. fig. 5.)

I am indebted for this Bopyrid to the same gentleman who sent me the species just recorded. *Pleurocrypta cluthæ* was obtained on a specimen of *Pandalina* (*Pandalus*) *brevirostris* (Rathke) dredged in the Clyde on April 16th, and is probably identical with the form observed by Dr. (now Professor) J. R. Henderson in the branchial chamber of *Pandalina brevirostris*, and referred to by him under the general name of "*Bopyrus*" in his work on "The Higher Crustacea of the Clyde" *, and which M. Jules Bonnier, in his monograph on the Bopyridæ already mentioned, ascribes doubtfully to the genus *Pseudione* †. It is not likely that M. Bonnier had at this time examined specimens of the Bopyrid referred to—at least he had not seen a specimen of a male, which, as will be shown, is different from the male of *Pseudione*.

The female is about 3·5 millim. ($\frac{1}{7}$ of an inch) in length, and in its general form, which is somewhat similar to *Pleurocrypta Patiencei*, is distinctly unsymmetrical. The anterior end is obliquely truncate and the head deeply immerged in the first segment of the mesosome. The pleopoda are scarcely developed and the uropoda are very like those of *Pleurocrypta Patiencei*.

The male (fig. 5) is slightly over a millimetre in length and is elongate, narrow, and subcylindrical, its greatest width being scarcely equal to one third of the entire length. The cephalon is bluntly rounded in front and is somewhat narrower than the first segment of the mesosome, to which it appears to be closely applied; the segments of the mesosome are, for the most part, widely separated, as in the male of *Pleurocrypta Hendersoni*, Giard and Bonnier (*P. marginata*, G. O.

* Nat. Hist. Soc. Glasg., Trans. vol. i. (n. s.) p. 37 (1886).
† 'Les Bopyridæ,' by M. Jules Bonnier, p. 300 (1900).

Sars). The metasome, which is undivided, is somewhat triangular in form and rather narrower than the segment of the mesosome to which it is articulated. The sides of the metasome converge gradually and equally to the blunt-pointed apex, as shown in the drawing, and its length is equal to about one fifth of that of the entire animal.

Pleurocrypta cluthæ appears to some extent to combine the characters of *P. Hendersoni* and *P. Patiencei*, the female being not unlike the female of the latter species, while, on the other hand, the male is very nearly similar to the male of the former.

All the three species I have recorded appeared to be fully mature.

(2) Amphipoda.

Tryphana Malmii, Boeck.

A single specimen of this somewhat rare Amphipod was obtained in the deep water about 9 or 10 miles off Aberdeen. Prof. G. O. Sars states that Boeck obtained his specimens at a considerable depth in the outer part of the Hardangerfjord in Norway, and that it has been taken by himself at three other localities *. Bovallius records its occurrence off the Færoe Islands, and the Rev. T. R. R. Stebbing in the North Atlantic, lat. 18° 8′ N., long. 30° 5′ W.; but apparently the only British record other than the present is that of the Rev. A. M. Norman, who, on behalf of the late T. Edward, records it from Banff †.

It is customary by some learned authors to modify "*Tryphana*," the name adopted by Boeck, and use "*Tryphœna*" instead; but the Rev. T. R. R. Stebbing does not approve of the change, and considers that the name as used by Boeck ought to be retained.

EXPLANATION OF PLATE I.

Fig. 1. *Pleurocrypta longibranchiata* (B. & W.), female. × 16.
Fig. 2. Ditto, male. × 38½.
Fig. 3. *Pleurocrypta Patiencei*, sp. n., female. × 19.
Fig. 4. Ditto, male. × 38½.
Fig. 5. *Pleurocrypta cluthæ*, sp. n., male. × 77.

---

* 'Crustacea of Norway,' vol. i. p. 18.

† Canon A. M. Norman, "On British Amphipoda," Ann. & Mag. Nat. Hist. (7) vol. v. (January 1900).

A. Scott del. Lindenbrenner lith.

1. P. EUROCRYPTA LONGIBRANCHIATA (1 & 2 W.), 3, 4. P. PATIENCEI, n. sp.
5. P. CLUTHÆ, n. sp.

M4589323